

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (original) An antimicrobial wound covering article, wherein at least a part of the article comprises a polyurethane resin which is associated with a particulate, silver containing glass, said glass being capable of releasing silver ions when coming into contact with a wound exudate.
2. (original) The article of claim 1, wherein at least a part of the polyurethane resin forms a matrix which comprises at least a part of the particulate glass.
3. (original) The article of claim 1, wherein at least a part of the particulate glass is present on a surface of a structure which comprises the polyurethane resin.
4. (currently amended) The article of claim 1, wherein at least a part of the polyurethane resin forms a ~~sheet-like~~ sheet structure.
5. (original) The article of claim 1, wherein at least a part of the polyurethane resin comprises a polyurethane foam.
6. (original) The article of claim 4, wherein at least a part of the polyurethane resin is not foamed.

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7. (currently amended) The article of claim 1, wherein the polyurethane resin forms a ~~gel-like~~ gel material.

8. (original) The article of claim 7, wherein at least a part of an external surface of the article comprises the polyurethane resin.

9. (original) The article of claim 4, wherein at least a part of the polyurethane resin and at least a part of the particulate glass form a layer which has an area weight of from about 400 g/m² to about 1200 g/m².

10. (currently amended) The article of claim 2, wherein at least a part of the polyurethane resin and at least a part of the particulate glass form a ~~sheet-like~~ layer having a thickness of from about 0.1 mm to about 2 mm.

11. (original) The article of claim 6, wherein at least a part of the polyurethane resin and at least a part of the particulate glass form a layer having a thickness of from about 0.4 mm to about 1.5 mm.

12. (currently amended) The article of claim 1, wherein at least a part of the polyurethane resin and at least a part of the particulate glass form a ~~sheet-like~~ layer having a thickness of from about 0.6 mm to about 1.2 mm.

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13. (original) The article of claim 9, wherein the polyurethane resin has a liquid absorption capacity of from about 0.5 g/g to about 10 g/g.

14. (original) The article of claim 8, wherein the polyurethane resin has a liquid absorption capacity of from about 1 g/g to about 6 g/g.

15. (original) The article of claim 11, wherein the polyurethane resin has a liquid absorption capacity of from about 1.5 g/g to about 3.5 g/g.

16. (original) The article of claim 9, wherein the layer has a water vapor permeability of from about 100 g/(m²*24h) to about 5,000 g/(m²*24h).

17. (original) The article of claim 10, wherein the layer has a water vapor permeability of from about 250 g/(m²*24h) to about 2,500 g/(m²*24h).

18. (original) The article of claim 11, wherein the layer has a water vapor permeability of from about 300 g/(m²*24h) to about 1,500 g/(m²*24h).

19. (original) The article of claim 8, wherein the polyurethane resin is self-adhesive.

20. (original) The article of claim 1, wherein the polyurethane resin comprises a pigment.

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21. (original) The article of claim 20, wherein the pigment comprises TiO_2 .

22. (original) The article of claim 21, wherein the TiO_2 is present in an amount of from about 0.01 % by weight to about 2 % by weight, based on the weight of the polyurethane resin.

23. (currently amended) The article of claim 1, wherein the ~~article further~~ polyurethane resin comprises a ~~superabsorber~~ superabsorbent.

24. (currently amended) The article of claim 23, wherein the ~~superabsorber~~ superabsorbent is present in an amount of from about 0.5 % by weight to about 30 % by weight, based on the weight of the polyurethane resin.

25. (original) The article of claim 1, wherein the polyurethane comprises units which are derived from a polyol component which comprises at least one polyether polyol.

26. (original) The article of claim 25, wherein the at least one polyether polyol comprises from about 2 to about 6 hydroxy groups.

27. (original) The article of claim 26, wherein the at least one polyether polyol has a hydroxy number of from about 20 to about 120.

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28. (original) The article of claim 27, wherein the at least one polyether polyol comprises at least about 10 % by weight of units which are derived from ethylene oxide.

29. (original) The article of claim 26, wherein the at least one polyether polyol comprises units which are derived from ethylene oxide, propylene oxide and at least one compound having more than two hydroxy groups.

30. (original) The article of claim 29, wherein the at least one compound comprises pentaerythritol.

31. (original) The article of claim 25, wherein the at least one polyether polyol has a weight average molecular weight of from about 2,000 to about 8,000.

32. (original) The article of claim 1, wherein the polyurethane comprises units which are derived from a polyisocyanate component which comprises at least one aliphatic polyisocyanate.

33. (original) The article of claim 32, wherein the aliphatic polyisocyanate comprises at least one polymethylene diisocyanate which has from about 2 to about 8 methylene groups.

34. (original) The article of claim 33, wherein the aliphatic diisocyanate comprises hexamethylene diisocyanate.

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35. (original) The article of claim 2, wherein the polyurethane comprises units which are derived from at least one polyether polyol and at least one aliphatic diisocyanate.

36. (original) The article of claim 35, wherein the at least one polyether polyol comprises from about 2 to about 6 hydroxy groups, has a hydroxy number of from about 20 to about 120 and comprises at least about 10 % by weight of units which are derived from ethylene oxide.

37. (original) The article of claim 36, wherein the at least one aliphatic diisocyanate comprises hexamethylene diisocyanate.

38. (original) The article of claim 1, wherein a ratio of a number of free isocyanate groups in a polyisocyanate starting material to a number of free hydroxy groups in a polyol starting material for producing the polyurethane is in the range of from about 0.3 to about 0.7.

39. (original) The article of claim 1, wherein a product of a functionality of a polyisocyanate starting material and a functionality of a polyol starting material for producing the polyurethane is at least about 5.2.

40. (original) The article of claim 1, wherein the glass comprises particles having a volume-related particle size of from about 0.1 μm to about 10 μm .

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41. (original) The article of claim 1, wherein the glass comprises glass fibers.

42. (original) The article of claim 40, wherein the glass comprises not more than about 5 % by weight of residual water.

43. (original) The article of claim 40, wherein the glass comprises about 40-60 mole-% of P_2O_5 , about 35-55 mole-% of at least one of CaO, MgO, ZnO and CuO, up to about 5 mole-% of at least one of Na_2O , K_2O and Li_2O , and about 5-20 mole-% of at least one of SiO_2 , Al_2O_3 and B_2O_3 , and contains from about 0.1 % by weight to about 8 % by weight of Ag_2O .

44. (original) The article of claim 42, wherein the glass comprises about 45-55 mole-% of P_2O_5 , about 40-50 mole-% of at least one of CaO and MgO, up to about 5 mole-% of at least one of Na_2O and K_2O , and about 5-10 mole-% of at least one of SiO_2 and Al_2O_3 , and contains from about 0.5 % by weight to about 5 % by weight of Ag_2O .

45. (withdrawn) The article of claim 2, wherein the glass comprises about 45-55 mole-% of P_2O_5 , about 40-50 mole-% of MgO, and about 5-10 mole-% of at least one of SiO_2 and Al_2O_3 , and contains from about 1% by weight to about 3 % by weight of Ag_2O .

46. (withdrawn) The article of claim 1, wherein the glass comprises about 49-51 mole-% of P_2O_5 , about 43-45 mole-% of MgO, and about 5-7 mole-% of Al_2O_3 , and contains from about 1.5 %

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by weight to about 2.5 % by weight of Ag₂O.

47. (original) The article of claim 9, wherein the glass is present in an amount of from about 0.01 % by weight to about 40 % by weight, based on the combined weight of the glass and the polyurethane resin.

48. (original) The article of claim 43, wherein the glass is present in an amount of from about 0.05 % by weight to about 10 % by weight, based on the combined weight of the glass and the polyurethane resin.

49. (original) The article of claim 1, wherein the glass is present in an amount of from about 0.1 % by weight to about 5 % by weight, based on the combined weight of the glass and the polyurethane resin.

50. (original) The article of claim 1, wherein the article is capable of releasing silver ions for at least about 10 hours when in contact with a wound exudate.

51. (original) The article of claim 48, wherein the article is capable of releasing silver ions for at least about 24 hours when in contact with a wound exudate.

52. (original) The article of claim 49, wherein the polyurethane resin comprises at least one of

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elemental Al, Zn, Mg and basic compounds thereof.

53. (original) The article of claim 52, wherein said at least one of elemental Al, Zn, Mg and basic compounds thereof is present in an amount of from about 0.01 % by weight to about 5 % by weight, based on the weight of the polyurethane resin.

54. (original) The article of claim 49, wherein the glass contains from about 0.5 to about 2.5 % by weight of Ag_2O .

55. (withdrawn) The article of claim 1, wherein the polyurethane comprises units which are derived from at least one polyether polyol and at least one aliphatic diisocyanate, and wherein the glass comprises about 45-55 mole-% of P_2O_5 , about 40-50 mole-% of MgO , and about 5-10 mole-% of at least one of SiO_2 and Al_2O_3 , and contains from about 1 % by weight to about 3 % by weight of Ag_2O .

56. (original) The article of claim 1, wherein the article further comprises a backing material.

57. (original) The article of claim 56, wherein the backing material comprises a polyurethane.

58. (original) The article of claim 57, wherein the backing material comprises a polyurethane sheet having a pressure sensitive adhesive on a side thereof which faces the polyurethane resin which is

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associated with the glass.

59. (original) The article of claim 58, wherein the polyurethane sheet is substantially transparent.

60. (original) The article of claim 56, wherein the article is a bandage.

61. (original) The article of claim 59, wherein the article is a bandage.

62. (original) The article of claim 1, wherein the article is one of a wound dressing, a wound pad and a compress.

63. (original) The article of claim 43, wherein the article releases silver at a rate of from about 5 mg/(m²*24h) to about 50 mg/(m²*24h).

64. (original) The article of claim 1, wherein the article releases silver at a rate of from about 10 mg/(m²*24h) to about 40 mg/(m²*24h).

65. (currently amended) The article of claim 1, wherein the polyurethane resin comprises [[the]] a residue of a Bi containing catalyst which was used for the production of the polyurethane resin.

66. (original) The article of claim 2 wherein the polyurethane resin has been formed by reacting at

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least one polyol and at least one polyisocyanate in the presence of the particulate glass.

67. (withdrawn) The article of claim 1, wherein the polyurethane comprises units which are derived from hexamethylene diisocyanate and units which are derived from at least one polyether polyol having a hydroxy number of from about 20 to about 120 and comprising at least about 10 % by weight of ethylene oxide units, wherein the particulate glass has a volume-related particle size of from about 0.1 μm to about 10 μm , comprises about 45-55 mole-% of P_2O_5 , about 40-50 mole-% of MgO , and about 5-10 mole-% of Al_2O_3 , and contains from about 1 % by weight to about 3 % by weight of Ag_2O , and wherein the polyurethane resin forms a matrix which contains about 0.1 % by weight to about 5 % by weight of the glass, based on the combined weight of the glass and the polyurethane.

68. – 97. (cancelled)

98. (currently amended) The article of claim 1, wherein keeping the article ~~does not show a noticeable discoloration after having been kept~~ at 50 °C for 6 months does not result in a discoloration thereof which is discernible with the naked eye.

99. (currently amended) The article of claim 67, wherein keeping the article ~~does not show a noticeable discoloration after having been kept~~ at 50 °C for 6 months does not result in a discoloration thereof which is discernible with the naked eye.

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100. (currently amended) The article of claim 1, wherein sterilizing the article ~~does not show a noticeable discoloration after having been sterilized~~ with 26 kGy of γ -rays does not result in a discoloration thereof which is discernible with the naked eye.

101. (previously presented) The article of claim 1, wherein the article shows an antimicrobial activity against Escherichia coli IFO 3972, tested according to JIS 2801:2000, of at least about 3.6.

102. (previously presented) The article of claim 1, wherein the article shows an antimicrobial activity against Staphylococcus aureus, tested according to JIS 2801:2000, of at least about 3.3.

103. (currently amended) An antimicrobial wound covering article, wherein at least a part of the article comprises a self-adhesive polyurethane resin with a particulate, silver containing glass dispersed therein, said glass being capable of releasing silver ions when coming into contact with a wound exudate, the polyurethane resin further comprising incorporated therein a ~~superabsorber~~ superabsorbent in an amount of from about 0.01 % to about 40 % by weight, based on the total weight of the polyurethane resin.

104. (currently amended) The article of claim 103, wherein the ~~superabsorber~~ superabsorbent is selected from water-absorbing salts of polyacrylates and copolymers thereof.

105. (currently amended) The article of claim 103, wherein the ~~superabsorber~~ superabsorbent

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comprises a crosslinked polymer based on acrylic acid/sodium acrylate.

106. (currently amended) The article of claim 103, wherein the ~~superabsorber~~ superabsorbent is incorporated in the polyurethane resin in an amount of from about 0.5 % to about 30 % by weight, based on the total weight of the polyurethane resin.

107. (currently amended) The article of claim 103, wherein at least a part of the polyurethane resin forms a ~~sheet-like~~ sheet structure.

108. (previously presented) The article of claim 103, wherein at least a part of the polyurethane resin comprises a polyurethane foam.

109. (currently amended) The article of claim 103, wherein the polyurethane resin forms a ~~gel-like~~ gel material.

110. (previously presented) The article of claim 107, wherein at least a part of the polyurethane resin and at least a part of the particulate glass form a layer having a thickness of from about 0.6 mm to about 1.2 mm.

111. (previously presented) The article of claim 110, wherein the polyurethane resin has a liquid absorption capacity of from about 1.5 g/g to about 3.5 g/g.

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112. (previously presented) The article of claim 111, wherein the layer has a water vapor permeability of from about 300 g/(m²*24h) to about 1,500 g/(m²*24h).

113. (cancelled)

114. (previously presented) The article of claim 103, wherein the polyurethane resin comprises TiO₂ in an amount of from about 0.01 % by weight to about 2 % by weight, based on the weight of the polyurethane resin.

115. (previously presented) The article of claim 103, wherein the polyurethane comprises units which are derived from a polyol component which comprises at least one polyether polyol.

116. (previously presented) The article of claim 115, wherein the at least one polyether polyol has a hydroxy number of from about 20 to about 120 and comprises at least about 10 % by weight of units which are derived from ethylene oxide.

117. (previously presented) The article of claim 116, wherein the at least one polyether polyol has a weight average molecular weight of from about 2,000 to about 8,000.

118. (previously presented) The article of claim 115, wherein the polyurethane comprises units which are derived from a polyisocyanate component which comprises at least one aliphatic

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polyisocyanate.

119. (previously presented) The article of claim 103, wherein the glass comprises particles having a volume-related particle size of from about 0.1 μm to about 10 μm .

120. (previously presented) The article of claim 119, wherein the glass comprises about 40-60 mole-% of P_2O_5 , about 35-55 mole-% of at least one of CaO , MgO , ZnO and CuO , up to about 5 mole-% of at least one of Na_2O , K_2O and Li_2O , and about 5-20 mole-% of at least one of SiO_2 , Al_2O_3 and B_2O_3 , and contains from about 0.1 % by weight to about 8 % by weight of Ag_2O .

121. (previously presented) The article of claim 120, wherein the glass comprises about 45-55 mole-% of P_2O_5 , about 40-50 mole-% of at least one of CaO and MgO , up to about 5 mole-% of at least one of Na_2O and K_2O , and about 5-10 mole-% of at least one of SiO_2 and Al_2O_3 , and contains from about 0.5 % by weight to about 5 % by weight of Ag_2O .

122. (previously presented) The article of claim 121, wherein the glass is present in an amount of from about 0.1 % by weight to about 5 % by weight, based on the combined weight of the glass and the polyurethane resin.

123. (previously presented) The article of claim 122, wherein the glass contains from about 0.5 to about 2.5 % by weight of Ag_2O .

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124. (previously presented) The article of claim 103, wherein the article is a bandage.

125. (previously presented) The article of claim 103, wherein the article is one of a wound dressing, a wound pad and a compress.

126. (previously presented) The article of claim 103, wherein the polyurethane resin has been formed by reacting at least one polyol and at least one polyisocyanate in the presence of the particulate glass.

127. (currently amended) The article of claim 103, wherein keeping the article ~~does not show a noticeable discoloration after having been kept~~ at 50 °C for 6 months does not result in a discoloration thereof which is discernible with the naked eye.

128. (currently amended) The article of claim 127, wherein sterilizing the article ~~does not show a noticeable discoloration after having been sterilized~~ with 26 kGy of γ -rays does not result in a discoloration thereof which is discernible with the naked eye.

129. (previously presented) The article of claim 103, wherein the article shows an antimicrobial activity against Escherichia coli IFO 3972, tested according to JIS 2801:2000, of at least about 3.6.

130. (previously presented) The article of claim 129, wherein the article shows an antimicrobial

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activity against *Staphylococcus aureus*, tested according to JIS 2801:2000, of at least about 3.3.

131. (currently amended) An antimicrobial wound covering article, wherein at least a part of the article comprises a self-adhesive unfoamed polyurethane resin with a particulate, silver containing glass dispersed therein, said glass being capable of releasing silver ions when coming into contact with a wound exudate, the polyurethane resin having further incorporated therein in an amount of from about 0.5 % to about 30 % by weight, based on the total weight of the polyurethane resin, a ~~superabsorber~~ superabsorbent which comprises a crosslinked polymer based on acrylic acid/sodium acrylate.

132. (previously presented) The article of claim 131, wherein the glass is present in an amount of from about 0.1 % by weight to about 5 % by weight, based on the combined weight of the glass and the polyurethane resin, and comprises about 45-55 mole-% of P_2O_5 , about 40-50 mole-% of at least one of CaO and MgO, up to about 5 mole-% of at least one of Na_2O and K_2O , about 5-10 mole-% of at least one of SiO_2 and Al_2O_3 , and from about 0.5 % by weight to about 5 % by weight of Ag_2O .

133. (new) The article of claim 132, wherein the glass comprises particles having a volume-related particle size of from about 0.1 μm to about 10 μm .